

Alliancing in Finnish Transport Agency, Finland

Pekka Petäjämäki, Director, Finnish Transport Agency

Finnish Transport Agency - Infrastructure* provides a platform for growth



€ Infrastructure assets

19,5 billion €



€ Current spending on on-going projects

2.9 billion €



€ FTA's share of the total infrastructure market

1/4

***Roads, Railways & Fairways**

€ Annual budget approximately

2,1 billion €

FTA personnel

650
experts

Number of people the FTA employs indirectly through projects

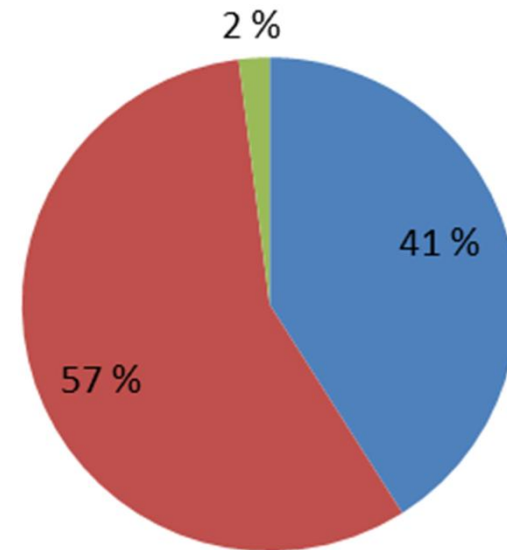
12,000

Major Projects in Finland 2016

- In 2016 about 600 Million euros will spent on large investment projects
- Current projects of the Projects Division amount to about 2,6 Billion euros.
- 32 projects underway, of which
 - 23 road connection projects
 - 7 railway traffic projects
 - 2 fairway projects
- An additional 4 projects in the preparation phase
- A total of 26 project managers are working in the Major Projects Division.

Financing for development investments per type of transport infrastructure (2016)

- Road connections 41%
- Railway traffic 57%
- Fairways 2%



Current major projects

ROAD PROJECTS

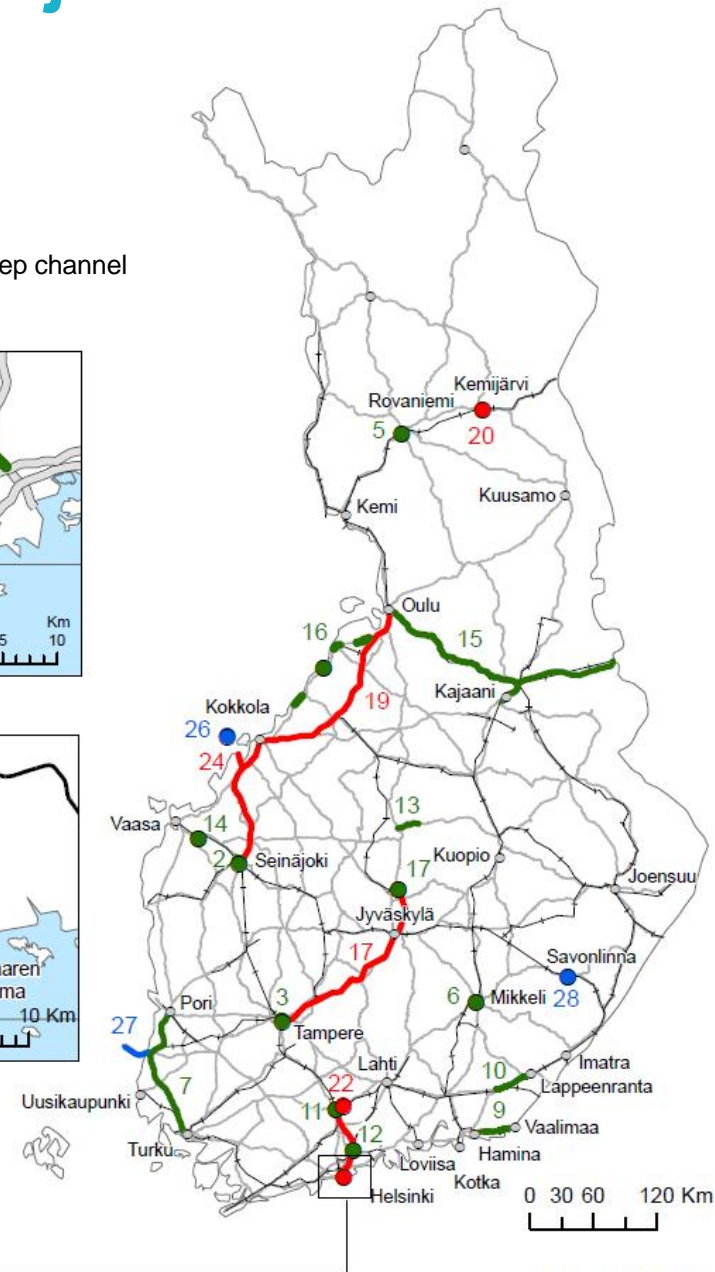
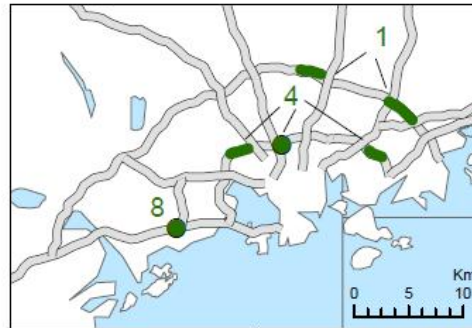
- 1 Ring Road III 2nd phase
- 2 Main Road 19 Seinäjoki eastern bypass
- 3 Main Road 12 Tampereen rantaväylä
- 4 Road 101, Improvement of Ring Road I
- 5 Main Road 4 at Rovaniemi
- 6 Main Road 5 at Mikkeli
- 7 Main Road 8 Turku-Pori
- 8 West Metro park-and-ride facilities
- 9 E 18 Hamina-Vaalimaa (PPP project)
- 10 Main Road 6 Taavetti-Lappeenranta
- 11 Main Road 3 Grade separated junction at Arolampi
- 12 Road 148 Improvement at Kerava
- 13 Secondary Road 77, Viitasaari-Keitele
- 14 Main Road 3, Tampere-Vaasa, Laihia 1st phase
- 15 Main Road 22 Oulu-Kajaani-Vartius
- 16 Main Road 8, investments in roads to Pyhäjoki nuclear Power plant
- 17 Road connections to the bio-product mill in Äänekoski

RAILWAY PROJECTS

- 17 Rail connections to the bio-product mill in Äänekoski
- 18 Ring Rail Line
- 19 Ostrobothnia rail line
- 20 Electrification of railway line between Rovaniemi and Kemijärvi
- 21 Western track in Central Pasila
- 22 Riihimäki triangle track
- 23 Helsinki-Riihimäki, increased capacity, 1st phase
- 24 Electrification of railway line between Pännäinen and Pietarsaari
- 25 Helsinki railway yard

FAIRWAYS PROJECTS

- 26 Pietarsaari channel
- 27 Rauma channel
- 28 Realignment of Savonlinna deep channel



New major projects term 2017 - 2020

RAILWAY PROJECTS

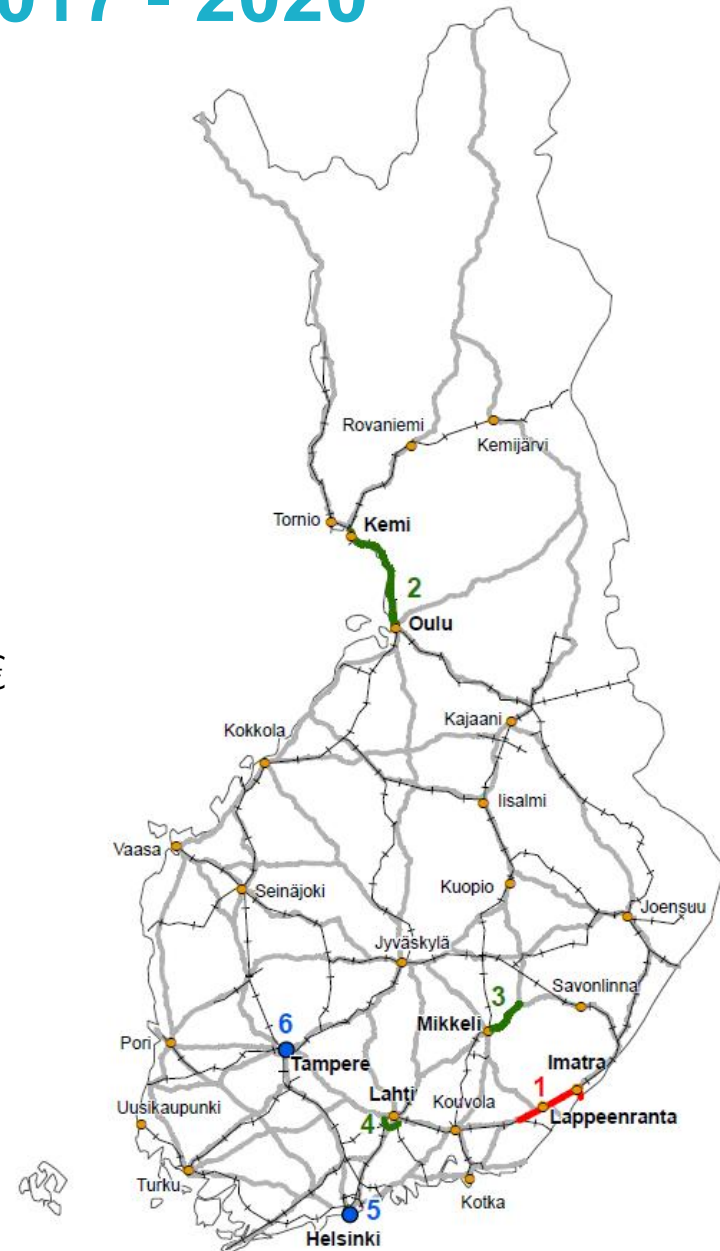
1. Luumäki - Imatra - Russian border 289 M€

ROAD PROJECTS

2. Main Road 4 between Oulu – Kemi 155 M€
3. Main Road 5 between Mikkeli-Juva 121 M€
4. Main Road 12 Lahti southern Ring Road 275 M€

TRAMLINER PROJECTS

5. Raidejokeri Helsinki tramline (state subsidy 83 M€) 275 M€
6. Tampere tramline (state subsidy 75 M€) 283 M€



Short story about Project Alliance in Finland

LCI comes to Finland 2008

- Lean principles, Integrated project deliveries and Lean Construction tools and methods started to achieve understanding

LIPS in Karlsruhe Germany 2009, Jim Ross introduced the Project Alliance

- EU-legislation challenge in the public sector

LIPS in Washington DC 2010

- We might be able to challenge the EU-legislation

LIPPI in Brisbane Australia 2011

- First Project Alliance has been established, several others coming

LIPS in Tampere Finland 2012

- We have four alliance projects in Finland

LIPS in Nottingham 2013

- We have six alliance projects and several hybrids, more coming
- LCI-Finland has 4,5 M€ R&D project 2013-2015

LIPS in Berkeley, USA 2014

- We have 22 alliance projects in Finland

LIPS in Barcelona 2015

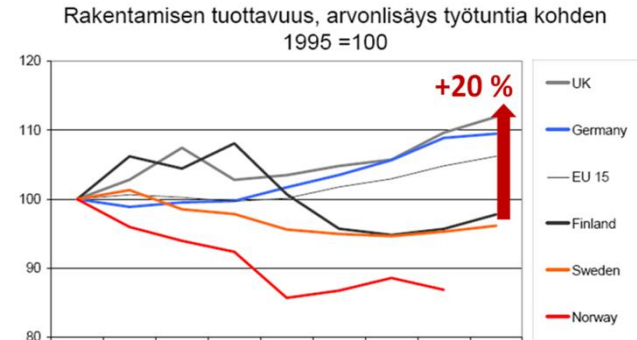
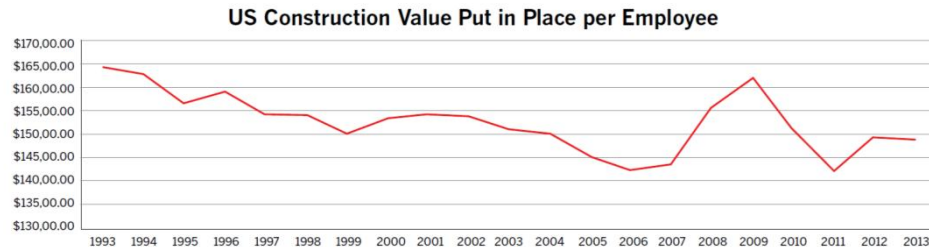
- Over 34 alliance projects in Finland

LIPS in Elsinore 2016

- Over 40 alliance projects in Finland

FTA has been
involved all the time

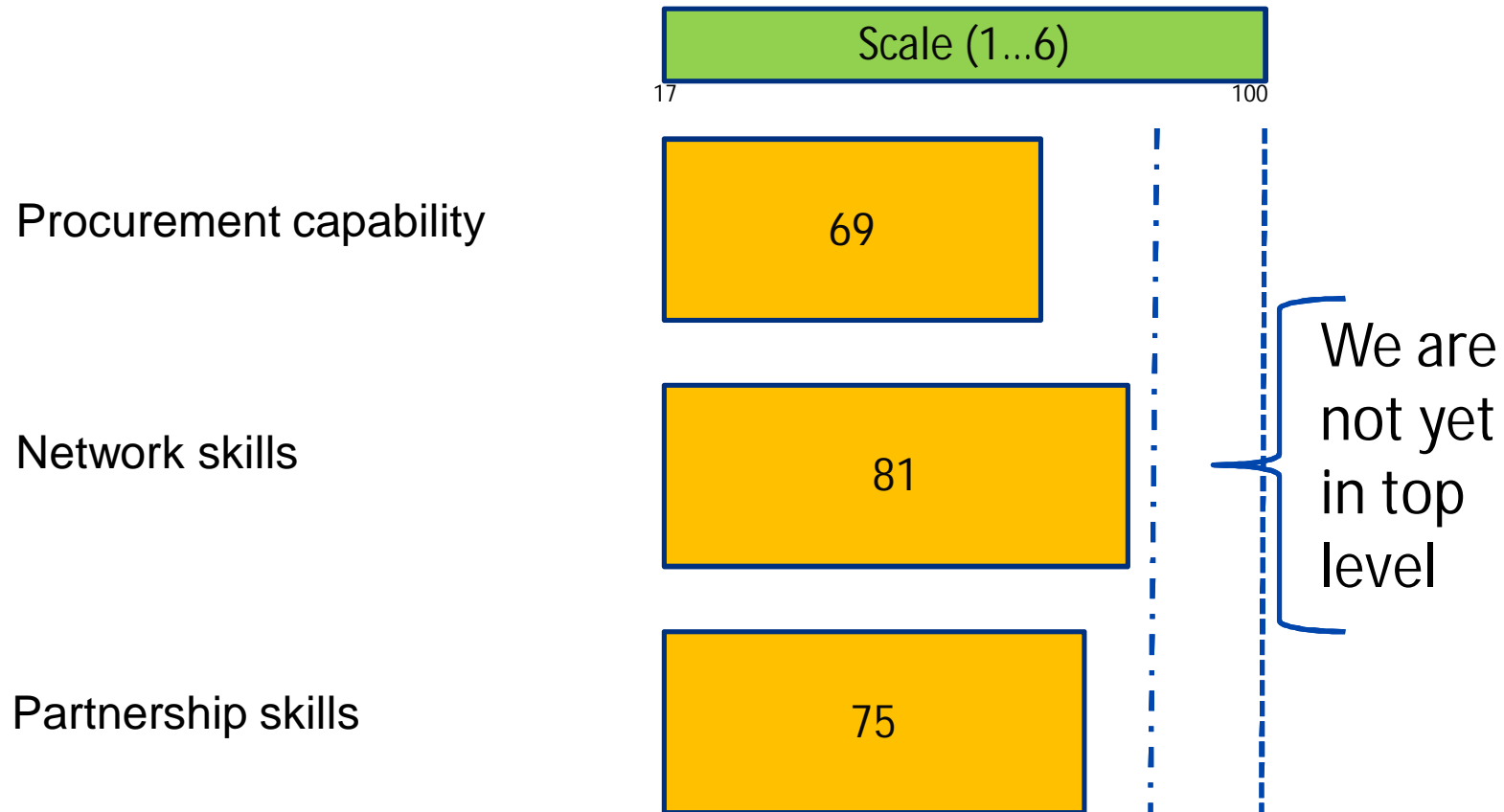
FinnTrA's Strategic Targets for Lean



- To improve productivity of the entire industry
- To change the culture into a more open and trusting way of working
- To improve the customer satisfaction for end products – faster, better quality and cheaper
- To develop innovativeness and knowledge
- We do believe there is huge potential, which is connected to the way of acquiring services and cooperating during the project



Contractors and Consultants estimate FTA every year



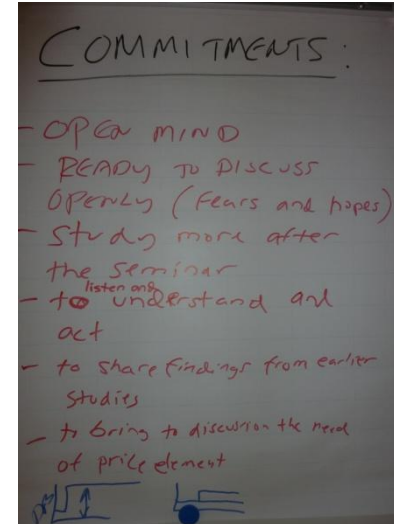
The most development areas in FTA:

- The sharing of risks and benefits in contracts
- The selection criteria, which are encouraging contractors to develop their expertise and innovations

Coaching is needed

Dialogue inside the owner's side

- Started in May 2010
- Core team started to develop the Finnish approach for Alliancing in June 2010
- Wider coaching in two workshops in November 2010
- More coaching during the selection process
- Every project increase knowledge



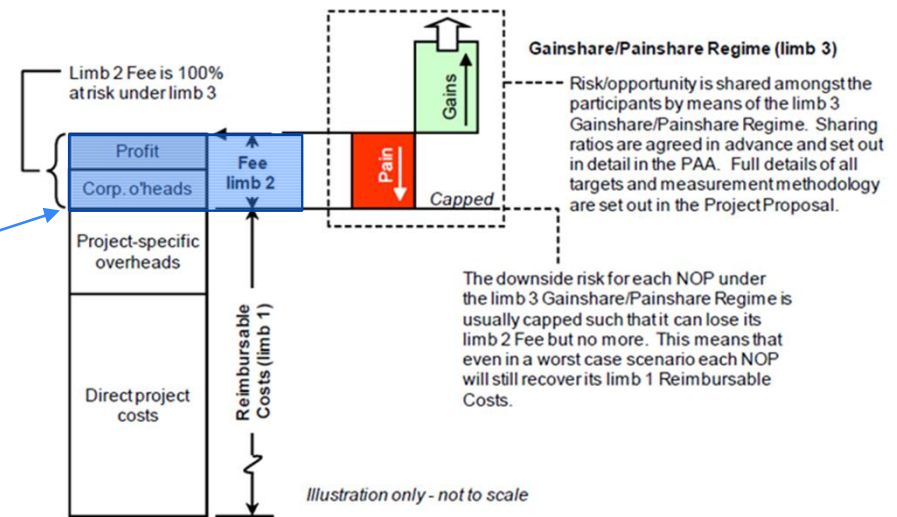
Establish Alliance

European Union procurement legislation

According to the EU directives and Finnish legislation:

- The price should be used, when contracting authority is making comparison of tenders
- Two possible selection criterias:
 1. The lowest price, or
 2. the most economically advantageous tender (so-called quality and price)
- In Tampere, the **limb 2** was used as a price element.
- Contracting entities should write out justifications for every comparison criteria

The “3-limb” NOP compensation model



Project Alliancing
Building on the Australian experience – May 2010 Helsinki

Case Tampere Tunnel Project: Value based Evaluation Criteria

Evaluation criterion		Weight			
		Stage2		Stage3	
		total	sub	total	sub
A.	Capability	100 %		75 %	
A1.	Project implementation plan and organisation	25 %		10 %	
	A1.1 Project implementation plan and organisation		25,00 %		10,00 %
A2.	Track Record	35 %		10 %	
	A2.1 Track record in Key Result Areas		25,00 %		10,00 %
	A2.2 Learning from mistakes		10,00 %		no evaluation
A3.	Value for Money	40 %		30 %	
	A3.1 Setting the target outturn cost		25,00 %		15,00 %
	A3.2 The budget critique		15,00 %		15,00 %
A4.	Alliance ability and leadership	0 %		25 %	
	A5.1 Alliance understanding and demonstrated leadership capabilities		no evaluation		25,00 %
B	Price			25 %	
B1	Fee %		no evaluation		25,00 %
	A+B Total	100,00 %		100,00 %	

- 2 Full days workshops in Stage 3 with best two Consortiums
- Workshop evaluation with teamwork specialist

Alliance selection process characteristics

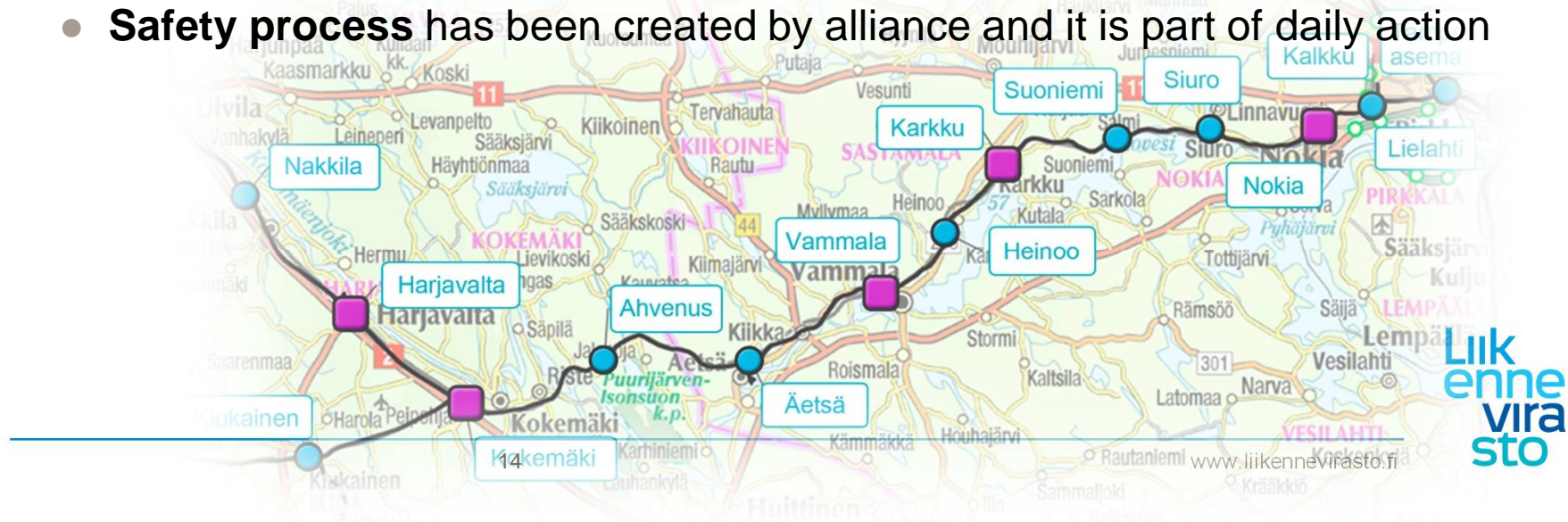
- Workshops and interviews in addition to evaluation of documents
- Procurement of organization; Top-Team
- Selection process binds momentarily a lot of resources and needs commitment. People need to be familiar with the alliance model
- A bidder must bind key persons to the project already at the bidding stage and it's not possible to use a separate bidding organization anymore
- Bidding for an alliance requires from contractors less effort than DB and PPP but new kind of skills are needed
- Bidding for an alliance requires from consultants similar effort than DB and PPP – rules with contractor side should be agreed
- The owner's role changes from a buyer and supervisor to an active project actor and this requires new competence
- New roles: probity adviser, alliance specialist, independent estimator, financial auditor

Experiences of Project Alliance in Finland

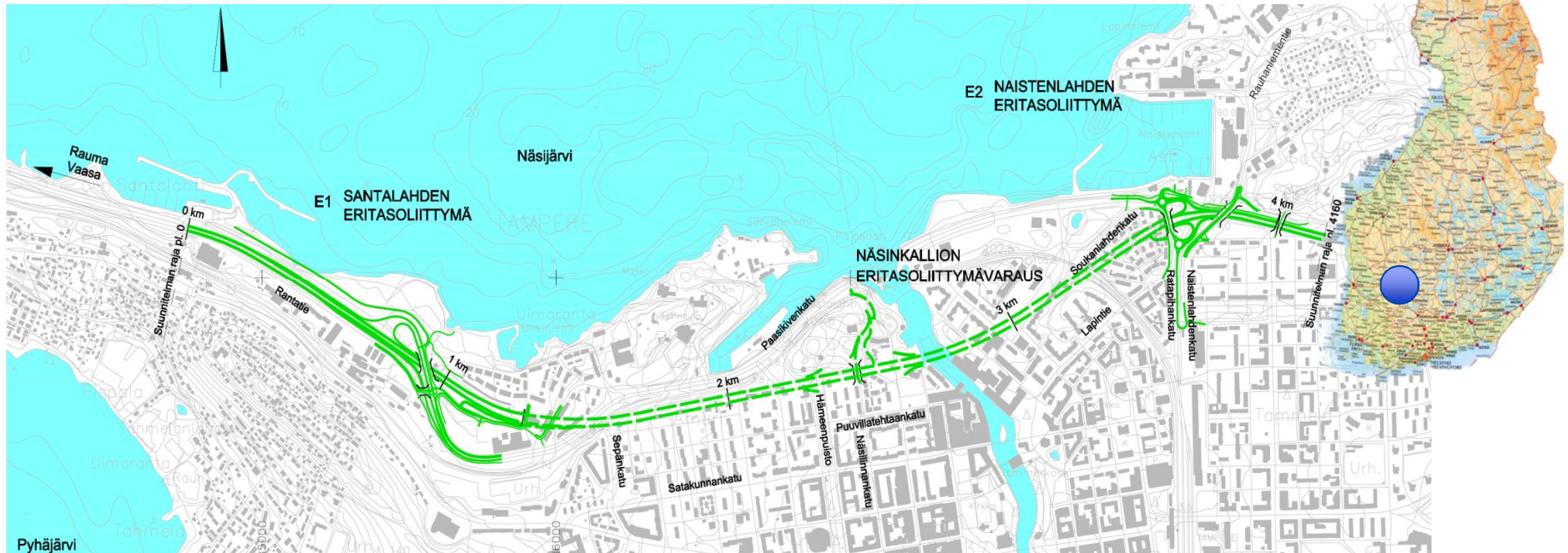
Tampere–Kokemäki rail renovation project

First Public sector Project Alliance Pilot in Europe 2011-2015

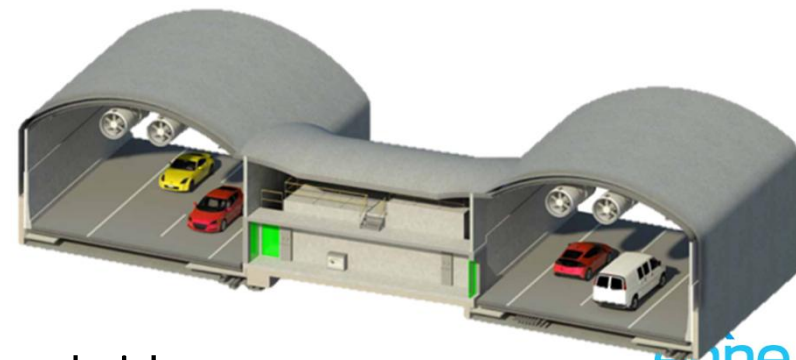
- Length of railway renovation project 89,6 km
- Project original budget 91 M€ (incl. owner's material 20–30 M€)
- Key Result Areas:
 - Accuracy of traffic during construction:
 - **Freight Traffic 99,93%, Personal Traffic 99,65% (Avg. In FIN ~82 %)**
 - **Project Completion – half a year ahead of Schedule**
 - **Safety level has been high level throughout the project delivery**
 - **Frequency of work accidents 6,2 (avg. In Finland 20 in railway projects)**
 - **Safety process has been created by alliance and it is part of daily action**



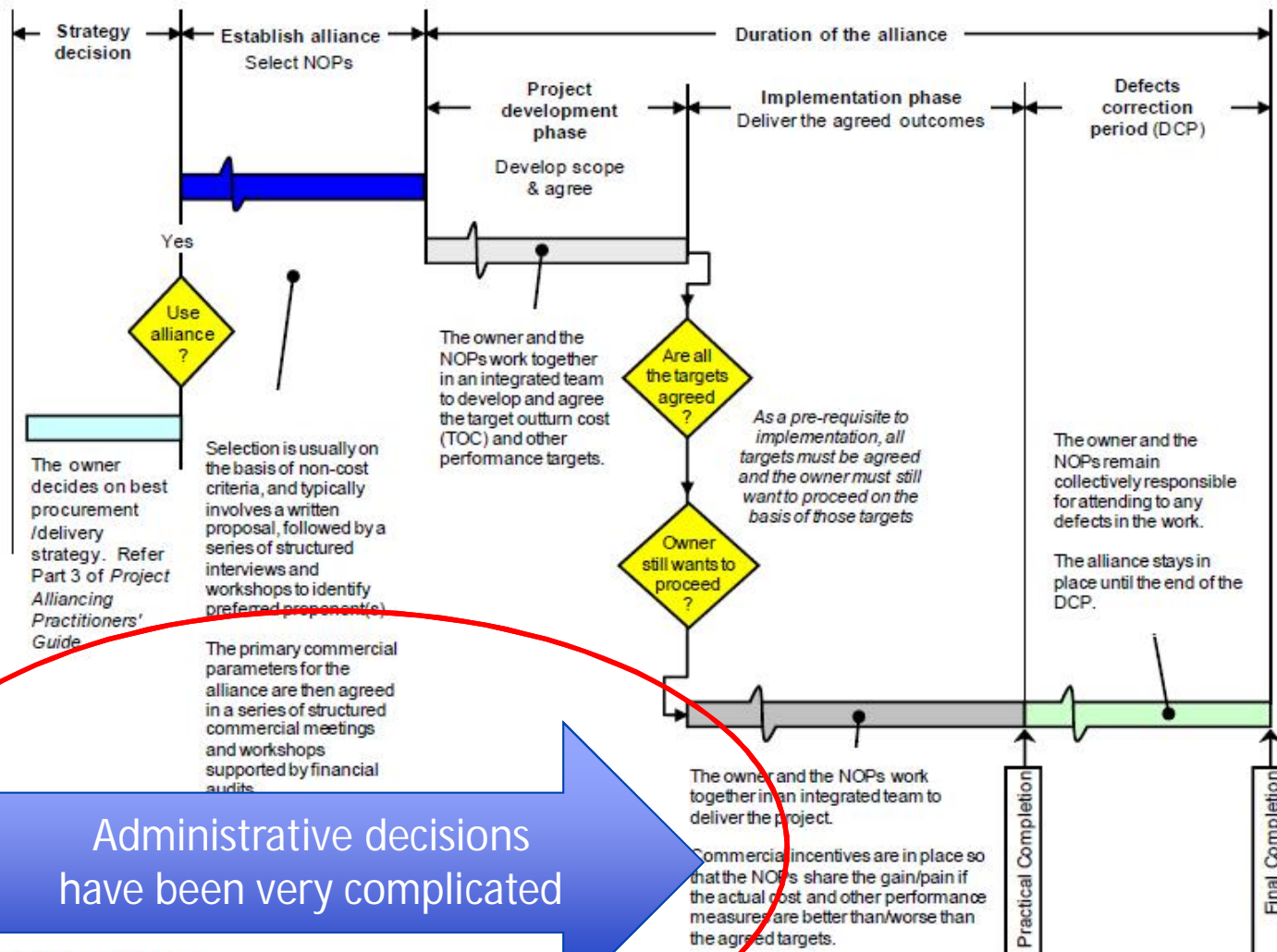
The Tunnel of Tampere



- 2 pieces of one-way 2,3 km road tunnels in the middle of the Tampere city center
- Interchange in both ends and provision for one in the middle
- 4,2 km highway and 4,0 km streets, 7 new bridges



The Alliance process in Tampere Tunnel



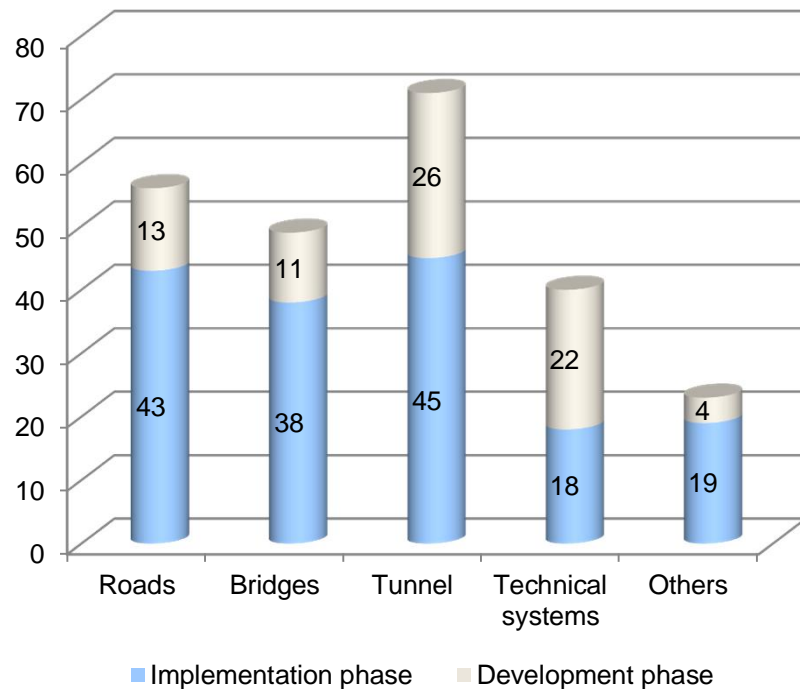
Project Alliancing
Building on the Australian experience – May 2010 Helsinki

Slide 17

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What has been achieved so far & Lessons learnt

More than 200 ideas → More than 30 innovations (VfM over 20 M€)



Technology groups have taken the responsibility to develop the ideas

- Clear evidence of innovation promotion, but ideas have to be systematically developed into innovations
- Less waste with internal processes since Alliance can define, plan and prepare what is best for the project => right things in the right time
- One and only Big room is a must
- Rather workshop than a meeting
- Quick and unanimous decision making is not a problem even with 5 parties in an Alliance
- You get what you measure (KRA)

Main Road 6: 30 km from 2 -lanes to 4 -lanes

Project

- Main Rd 6 Taavetti-Lappeenranta -renovation (10 km new alignment & 20 km old) and widening 2015-18
- Cost estimation 80 M€ - target cost 72 M€
- Owner FTA, design consults Pöyry Finland Oy & Ramboll Finland Oy and contractor Skanska Infra Oy

Idea

- Two phase Alliance procurement:
 1. First design consults
 2. After ½ year Contractor

Why

- Consults completed BIM -model, soil investigations and made preliminary proposals for final solutions.

Results so far

- Target cost will undercut
- Safety level high
- Faster delivery
- Traffic harms have been minimized
- Lean tools in use



Jyväskylä - Äänekoski rail renovation

Project

- New Bioproduct Mill (private investment 1,3 Billion) in Äänekoski will start their production in Q4/2017
- Invest decision 4/2015 – rail renovation design and construction 2015-17
- Budget 80 M€
- Owner FTA – service provider VR Track Oy



Idea

- Market dialogue and fast decision about contract model
- Fast and transparent procurement with one step Competitive Dialogue (3 mnts & 10 days)

Why

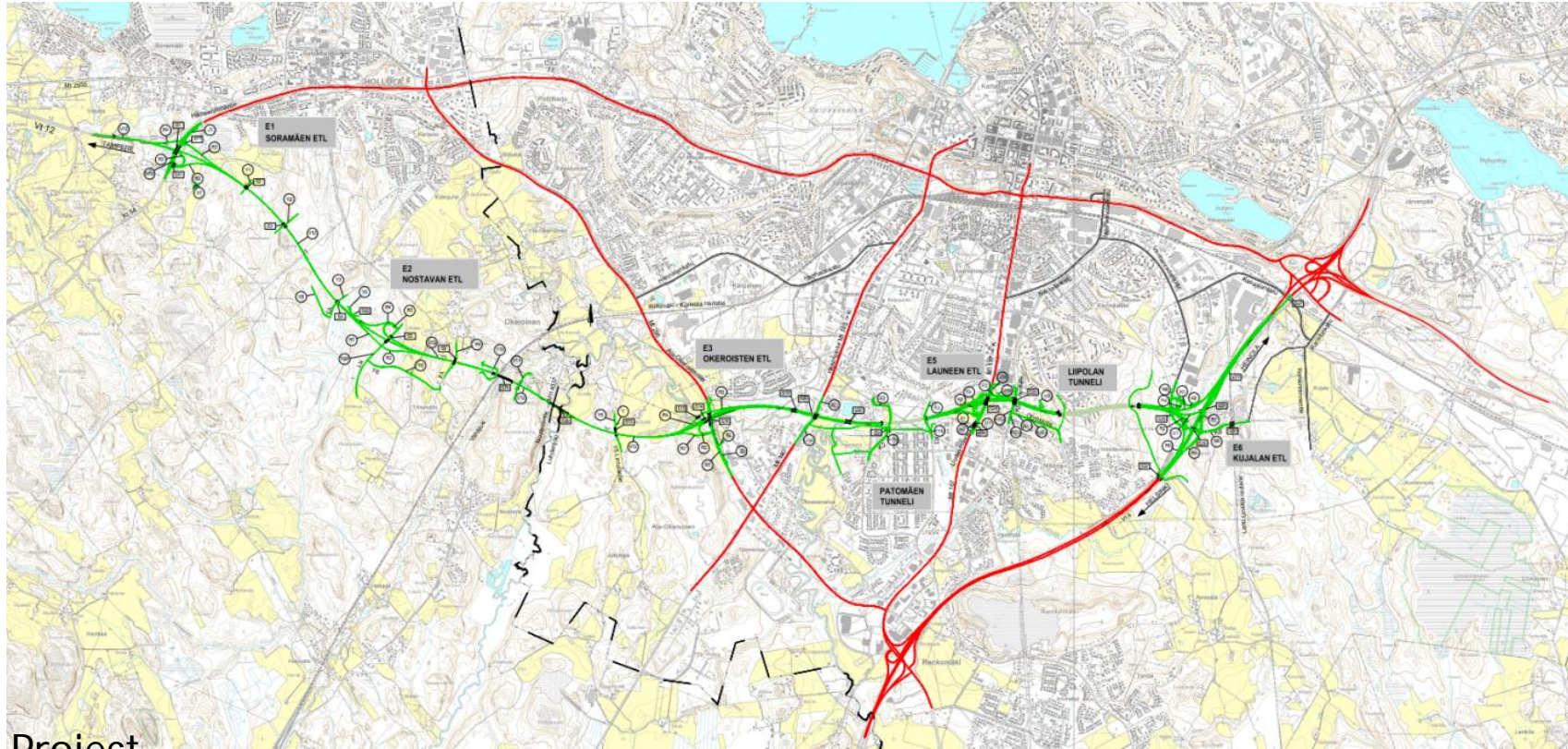
- Renovated railway connections (inc. electrification) should be in traffic same time as Bioproduct Mill



Results so far

- Project in schedule
- Safety level high

Main Road 12 Lahti Southern By-Pass



Project

- 12,5 km new main road – partly (7,2 km) in “forest” and partly (5,3 km) in built-up, populated area
- Five interchange and two tunnels: concrete tunnel and rock tunnel
- Big bridges and soft soil – sensitive environment
- Budget 275 M€ - City of Lahti will cover 77 M€

Main Road 12 Lahti Southern By-Pass

Idea

- Market dialogue with over 50 service provider participants
- After that decision about project size and contract model

Why

- Market dialogue is important step of strategic decision

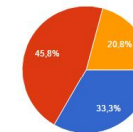
Results so far

- 55 % voted for divide project in two parts
- 82 % voted for DB model for unpopulated part of project
 - Change of culture: all consults wanted DB !
- 55 % voted for Alliance in built-up part of project
- If one huge project – DB and Alliance equal
- Project will start 2017
- DB & Alliance
- Timing for divided project

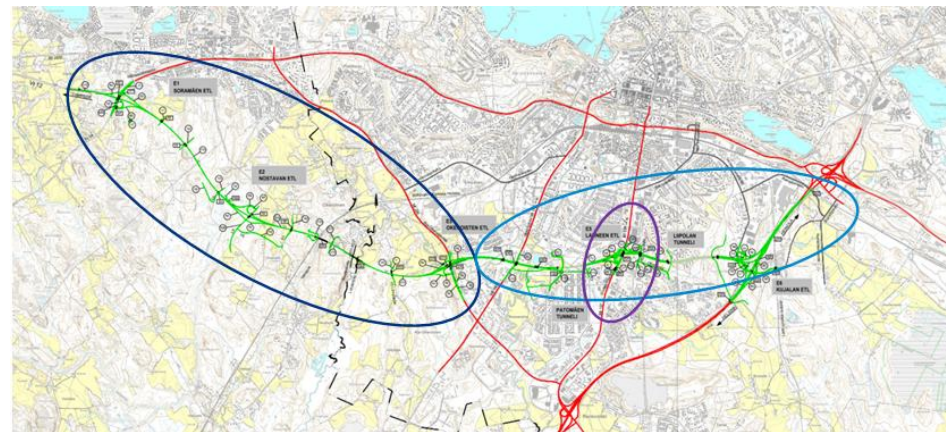
• Vastausten lukumäärä

- Urakoitsijat: 7 vastausta, joista 1 anonyymi
- Suunnittelijat: 11 vastausta, joista 2 anonyymejä
- Rakennuttajakonsultit: 4 vastausta
- YHTEENSÄ: 24 vastausta

Edustamani taho on: (24 vastausta)

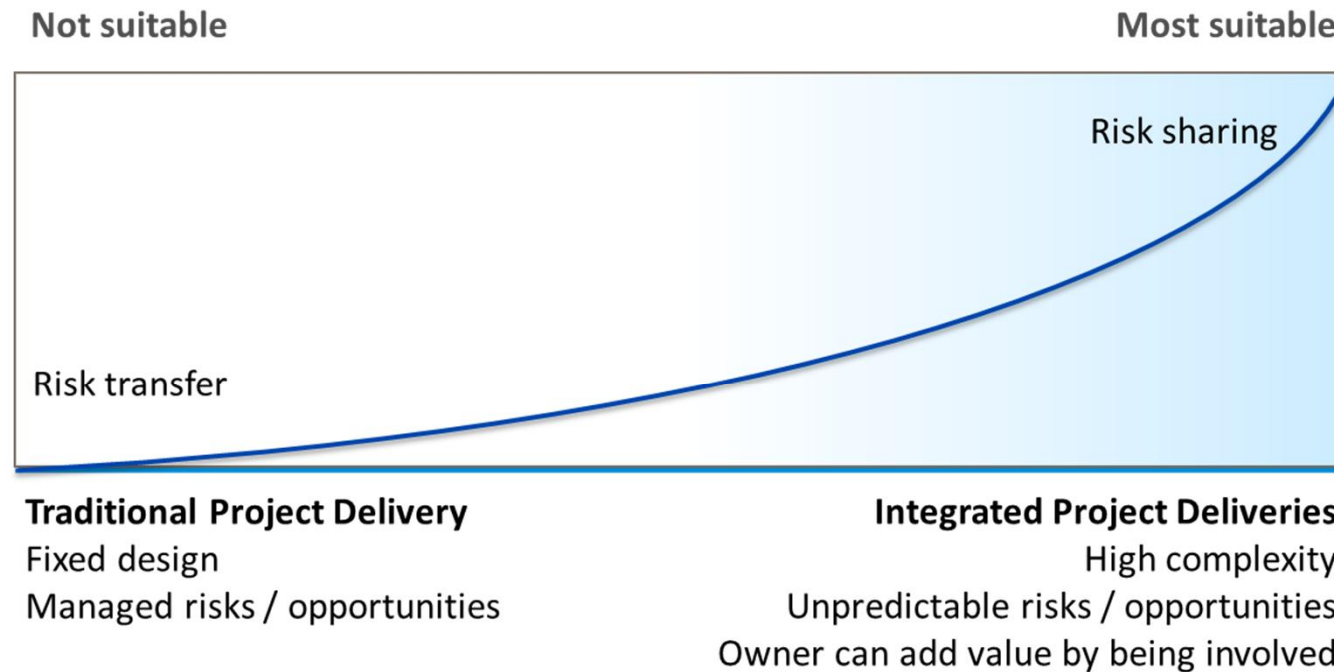


- Rakentaja (pääurakoitsija tai aliourakoitsija)
- Suunnittelija
- Rakennuttajakonsultti tai rakennuttamiseen asiantuntijapalveluita tarjoava toimija
- Muu asiantuntija



If you are thinking about to start an Alliance

- Think carefully, when it is good time to use the Alliance
- Use the good old way when you can't justify the new way
- But when you choose it, then make sure you get the whole benefit out of it



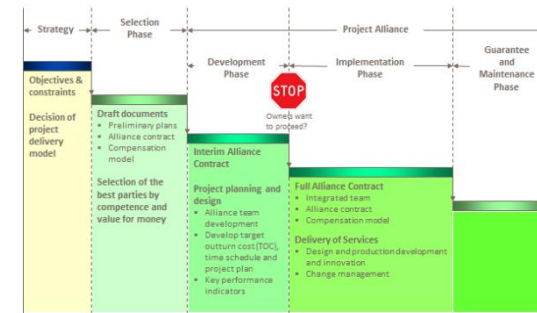
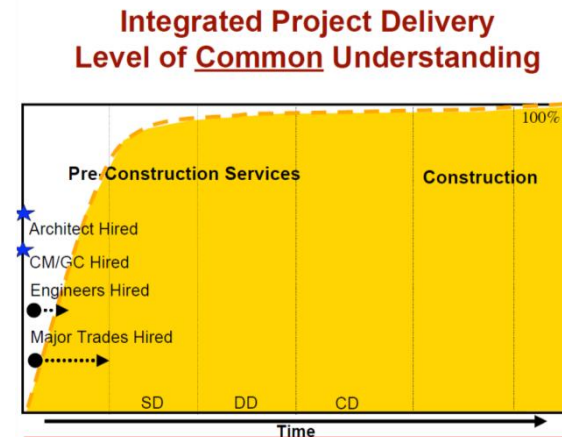
Source: Project Alliancing, May 2010 Helsinki, Jim Ross, PCI Group

When Alliance - Keep focus on

- Discussing and making the Commercial model understood during tendering phase, a lot of risk sharing principles between service providers are locked already at that stage
- Adopting the working culture when people are working also in other projects, *"Turning the alliance mode on"*
- Key employees possibilities to focus enough, because the working in alliance is very intense: *"Things do not wait ... they go on"*
- Defining Key Result Areas, *"You get what you measure"*
- Finding good incentive elements for key subcontractors that are not a part of the alliance, *"Common goals for everyone"*
- Trying to find the right and important experiences from the Pilot projects, *"You learn by doing, not just from textbooks"*

Challenges of Leadership and Readiness for Project Alliance

- Understanding the philosophy
 - Both the owner and the industry
- Communication
 - Clear messages
- Fair and simple process
 - Open, honest and straight
- Strong ambition
 - Understandable reasons for using alliance
- Trust
 - Fair pain-gain sharing



We believe, when you are developing your culture..



Together we are stronger



How the human being survive 70 000 years ago ?
And became a leading species on the earth?